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10/792,157	03/03/2004	Jean-Louis Lalonde	143.008US01	3709

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EXAMINER
WANG, BEN C

ART UNIT	PAPER NUMBER
2192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/792,157	LALONDE ET AL.
	Examiner	Art Unit	
	BEN C. WANG	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*15 February 2008*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-25*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-25*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Applicant's amendment dated February 15, 2008, responding to the Office
action mailed October 18, 2007 provided in the rejection of claims 1-25.

Claims 1-25 remain pending in the application and which have been fully
considered by the examiner.

Applicant's arguments with respect to claims rejection have been fully considered
but are moot in view of the new grounds of rejection – see *Alaire* - art made of record,
as applied hereto.

Declaration of Lalonde and Boudreault- Ferland under 37 C.F.R. § 1.131

2.   The amendment was filed on February 15, 2008 under 37 CFR §1.131,
primarily based on declaration of Jean-Louis Lalonde and Alexandre Boudreault-
Ferland under 37 CFR §1.131 (Exhibit A, Exhibit B, and Exhibit C) to swear
behind the filing date of November 2003 of Joshua Duhl's reference.

3.   The amendment filed on February 15, 2008 under 37 CFR 1.131 is
sufficient to overcome the Joshua Duhl's reference.

Claim Rejections – 35 USC § 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

4.   Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jeremy Allaire (*Macromedia® Flash MX-A next-generation rich client, March*

2002, Macromedia, Inc.) (hereinafter 'Allaire' - art made of record) in view of

Michel K. Bowman-Amuah (Pat. No. US 6,601,234 B1) (hereinafter 'Bowman-

Amuah')

5.   **As to claim 1** (Previously Amended), Allaire discloses a distributed

fabrication system for creating, while promoting strategic alignment between

information technology departments and business units' objectives (e.g., P. 1,

Sec. of "The Internet and client-side applications", 3rd Par. - ... these trends are

driving the industry towards next-generation rich client.), a business application

compatible with XInternet technologies via a communication network (e.g., P. 2,

Sec. of "Rich clients and rich Internet Applications" - ... Rich client technologies

should: ...; 2nd Bullet – Integrate content, communications, and application

interfaces into a common environment ..."), the fabrication system comprising:

- a client workstation connectable to the communication network, the
  workstation having a browser interface (e.g., P. 1, 1st Par. - ...
  Macromedia® is ushering in the next major innovation in <u>client-side</u>
  <u>Internet content and applications</u> ...; Sec. of "The <u>Internet</u> and <u>client-side</u>
  <u>applications</u>", 1st Par. - ... dynamically composed and delivered 'pages' to
  <u>web browsers</u>);

- a software factory displayed in the browser interface through which a user
  fabricates the business application in response to business need
  specifications; the software factory being displayed in the browser
  interface from factory building files (e.g., P. 2, Sec. of "Rich clients and
  rich Internet applications", (a) Provide an efficient, high-performance
  runtime for executing code, content and communications; (b) Integrate
  content, communications, and application interfaces into a common
  environment; (c) Provide powerful and extensible object models for
  interactivity; (d) Enable rapid application development through
  components and re-use; (e) Enable the use of web and data services
  provided by application servers; (f) Embrace connected and disconnected
  client, and (g) Enable easy deployment on multiple platforms and
  devices), the software factory comprising:

  - a first tool for defining a solution containing the business application,
    the first tool comprising components for entering solution parameters
    (e.g., P.7, Sec. of "Enable rapid application development through

component and re-use", 1st Bullet – Macromedia® Flash Components <u>can define customizable properties, methods, and events</u> …);

- a third tool for validating the solution, the third tool comprising components for previewing the solution online by automatically generating a working prototype of the business application using dynamic database simulation means for testing the working prototype of the business application and communication components for feedback messages between users testing the working prototype of the business application and users constructing the solution (e.g., P. 2, Sec. of "Rich clients and rich Internet applications", 6th Bullet - Embrace <u>connected</u> and <u>disconnected</u> clients. … be <u>online</u> and in a web browser to perform work … Rich clients <u>must enable both of these types of applications to be easily built and deployed</u>); and

- a fourth tool for generating code offline, said code forming an initial and operational version of the business application to be supplied as a normalized input to a regular desktop development system (e.g., P. 2, Sec. of "Rich clients and rich Internet applications", 6th Bullet - Embrace connected and <u>be used offline</u> on occasionally connected devices … Rich clients must <u>enable both of these types of applications to be easily built and deployed</u>); and

- a web server connectable to the communication network, the web server providing the factory building files and controlling the software factory displayed in the browser interface of the workstation (e.g., P. 2,

Sec. of "Rich clients and rich Internet applications", 5th Bullet – The

promise of rich clients includes the ability to cleanly separate

presentation logic and user interfaces form the application logic hosted

on the network. Rich clients should provide a model for easily using

remote services provides by back-end components ...; P. 8, Sec. of

"Enable the use of web services and data services provided by

application servers", 1st Par. - Rich clients are made much more

valuable when combined with logic and data delivered from application

servers and XML web services ... Macromedia® will provide details on

new server solutions for building rich Internet applications with

Macromedia Flash®, Macromedia ColdFusion®, and other applications

servers: ...; P. 7, Sec. of "Enable rapid application development

through components and re-use", 1st Par. - ... with Macromedia Flash

MX®, we've introduced a new Macromedia Flash® Component model

that enables powerful capabilities to be shared and used by developers

of any skill set ...)

Allaire does not explicitly disclose a second tool for constructing the solution

using business models in relation with the solution parameters, the second tool

comprising components for designing basic characteristics of the solution and a

business domain model of the business application having a main entity and

related entities, the main entity establishing relationships with the related entities,

the main entity and the related entities having attributes and actions, the second

tool also comprising components for designing a menu of the business

application, specific functions of the business application, and functional

descriptions of the business application.

 However, in an analogous art of *Attribute Dictionary in a Business Logic*

Services Environment, Bowman-Amuah discloses a second tool for constructing

the solution using business models in relation with the solution parameters (e.g.,

Col. 174; Lines 57-62), the second tool comprising components for designing

basic characteristics of the solution (e.g., Fig. 42, elements of "Other Patterns",

" Other Frameworks"; Fig. 50, element 5008) and a business domain model of

the business application having a main entity and related entities (e.g., Fig. 42,

element of Business Entity Component; Fig. 50, elements of "Workflow", "Class

Diagram"), the main entity establishing relationships with the related entities

(e.g., Fig. 104; Col. 232, Line 53 through Col. 233, Line 49), the main entity and

the related entities having attributes and actions (e.g., Col. 10, Line 56 through

Col. 11, Line 2), the second tool also comprising components for designing a

menu of the business application (e.g., Fig. 40, elements 3906, 4006, 3908),

specific functions of the business application (e.g., Fig. 45; Col. Lines 30-31, 58-

67), and functional descriptions of the business application (e.g., Fig. 49, element

of Detailed Design).

 Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to combine the teachings of Bowman-Amuah into

the Allaire's system to further provide a second tool for constructing the solution

using business models in relation with the solution parameters, the second tool

comprising components for designing basic characteristics of the solution and a

business domain model of the business application having a main entity and related entities, the main entity establishing relationships with the related entities, the main entity and the related entities having attributes and actions, the second tool also comprising components for designing a menu of the business application, specific functions of the business application, and functional descriptions of the business application in Allaire system.

The motivation is that it would further enhance the Allaire's system by taking, advancing and/or incorporating Bowman-Amuah's system which offers significant advantages for software patterns and more particularly to a facility for encapsulating architectural mechanisms within business objects as once suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21).

6.   **As to claim 2** (incorporating the rejection in claim 1) (Original), Allaire discloses the distributed fabrication system wherein the first, the second, the third and the fourth tools of the software factory use a business model to assist with creation of the business application to isolate business application definitions from implementation of the business application on any specific technology platform (e.g., P. 2, Sec. of "Rich clients and rich Internet applications", 3rd Bullet – Provide <u>powerful and extensible object models for interactivity</u> … this common object model must integrate user interface, communications, and system level services …; P. 6, Sec. of "Provide a powerful and extensible object model for interactivity", 1st Par. – Macromedia® Flash MX includes <u>one of the richest object models for interactive client applications on the internet</u> …)

7.   **As to claim 3** (incorporating the rejection in claim 1) (Original), Bowman-Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31, Lines 52-67) wherein the first tool further comprises importing means for importing a business object and data model (e.g., Col. 115, Lines 27-32; Col. 183, Lines 9-15) for constructing the solution and to design the basic characteristics of the solution, the application business domain model specific functions (e.g., Col. 13, Lines 30-38; Col. 140, Lines 56-65), and the application functional descriptions (e.g., Col. 174, Lines 57-62).

8.   **As to claim 4** (incorporating the rejection in claim 1) (Original), Bowman-Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31, Lines 52-67) wherein the code forming the business application comprises an applicative framework supplying a generic dynamically adaptable N-Tier client-server-object-oriented applicative infrastructure (e.g., Col. 32, Lines 45-47; Col. 10, Lines 45-55) constructed on top of a third party software system infrastructure (e.g., Col. 37, Lines 39-42) to support the business application (e.g., Col. 19, Lines 34-37), the third party software system infrastructure being complemented by database management system components (e.g., Col. 51, Lines 52-55; Col. 52, Lines 17-35).

9.   **As to claim 5** (incorporating the rejection in claim 4) (Original), Allaire discloses the distributed fabrication system wherein the applicative framework

comprises generic adaptable software structures for the creation of the business

application on any specific technology platform using a web server, a business

server and a database server on which the business application is fabricated,

developed, tested and deployed, the applicative framework also comprising:

- user services for managing a business application user interface, relying

  on a XInternet one web page application pattern (e.g., P. 7, Sec. of

  "Enable rapid application development through components and re-use,

  1st Par. - … <u>common patterns and behaviors</u> to be easily encapsulated

  into components that can be shared and re-used by others … With

  Macromedia® Flash MX, … <u>a new Macromedia® Flash Component model</u>

  <u>that enables powerful capabilities to be shared and used</u> …), on a

  workstation having a browser interface to access the business application

  from the web server on which business application web services are

  deployed (e.g., P. 5, Sec. of "Integrate content, communications and

  application interfaces into a common environment", 1st Par. - Macromedia

  Flash MX provides an unparalleled environment in terms of <u>the richness of</u>

  <u>content, media, and application interface element</u> ….), the business

  application user interface being a dynamic web page avoiding web page

  transitions for user experience (e.g., P. 4, 1st Bullet – Code, media and

  data <u>caching</u> - … <u>be cached locally</u> … <u>without returning to the Internet</u> …),

  the user services comprising one web page application components

  library (e.g., P. 7, Sec. of "Enable rapid application development through

  components and re-use, 1st Par. - … common patterns and behaviors to

be easily encapsulated into components that can be shared and re-used

…) for displaying the business application user interface on the browser

interface and for communicating between the business application user

interface displayed in the browser interface (e.g., P. 3, Sec. of "Provide an

efficient, high-performance runtime for executing code, content and

communications", 3rd Bullet – Efficient rendering through vector graphics;

9th Bullet – Visual transitions and visual state) and the business

application web services deployed on the web server, the one web page

application components library providing bi-directional communications

between the workstation and the web server (e.g., Sec. of "Enable the use

of web services and data services provided by application servers, 1st Par.

– Rich clients are made much more valuable when combined with logic

and data delivered from <u>application servers and XML web services</u> ….; P.

2, Sec. of "Rich clients and rich Internet applications", 2nd Bullet –

Integrate content, <u>communications</u>, and application interfaces into a

common environment);

Bowman-Amuah discloses the followings:

 o business services for managing business application logic (e.g.,

  Fig. 12, elements of Business Logic, Directory Services) and

  communications between the business application web services

  (e.g., Col. 107, Lines 8-11), the applicative framework and the third

  party software system infrastructure (e.g., Col. 37, Lines 39-42), the

  business services being implemented on the business server (e.g.,

Fig. 12, elements of Information, Database), the business services

comprising generic adaptable components having interface

application components (e.g., Fig. 40, element 4006), core

application components (e.g., Col. 24, Lines 19-24), utility

application components (e.g., Col. 36, Lines 4-7; Col. 59, Lines 14-

16) and task application components (e.g., Fig. 12, element System

Services – Task); the generic components being used to insure

code reusability, adaptability, uniformity, isolation, stability,

robustness, scalability and performance (e.g., Col. 125, Lines 46-

52); and

o   data services (e.g., Col. 88, Lines 46-57) for managing business

application data access logic (e.g., Col. 100, Lines 62-64); and

communications (Fig. 16, element Network Connections) between

the business services (Col. 126, Lines 60-65; Col. 199, Lines 10-

13) and the third party database management system components

(e.g., Col. 52, Lines 32-34) on the database server (e.g., Col. 34,

Lines 24-28) upon request of the business server (e.g., Col. 34,

Lines 24-28) on which the business services are implemented, the

data services comprising generic adaptable database access

components (e.g., Col. 51, Lines 55-64) having database scripts

(e.g., Col. 104, Lines 36-40) to automatically assist the creation of

application database tables (e.g., Col. 278, Lines 30-33; Fig. 126,

creates) and Stored procedures (e.g., Col. 278, Lines 50-54)

required to access and manage application data on the database
server.

10.   **As to claim 6** (incorporating the rejection in claim 5) (Original), Allaire
discloses the distributed fabrication system wherein the code generated by the
fourth tool comprise an approved, operational and well-formed solution
comprising the applicative framework specified from business application
definitions to be supplied as a normalized input to a regular desktop development
system (e.g., P. 5, Sec. of "Integrate content, communications and application
interfaces into a common environment, 2nd Bullet – Standard user interface
components ... a standard set of user interface components ... from standard
building blocks ....; P. 7, Sec. of "Enable the use of web services and data
services provided by application servers", 1st Bullet – Develop Macromedia
Flash services using Macromedia ColdFusion MX®, Java and Microsoft .Net® -
... build with standard Java® Servlets, Java Classes, EJBs, Microsoft's .NET®)

11.   **As to claim 7** (incorporating the rejection in claim 1) (Original), Bowman-
Amuah discloses the distributed fabrication system wherein the first tool also
comprises security components to define security for business users and
information technology experts access rights and roles to the solution (e.g., Fig.
14, element 1410 – Security; Col. 34, Lines 30-32 - Security over service
resource ...; Col. 52, Lines 17-24 - ... it handles security, authentication ...; Col.
52, Lines 36-46 - ... depends on the role of user, the user group etc ...)

12.   **As to claim 8** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the second tool comprises web services (e.g., Col. 107,

Lines 8-11) to define and connect application domain entities (e.g., Col. 13, Lines

30-38; Col. 140, Lines 56-65) and the third tool comprises web services to

preview, test, validate and interact with application domain objects and object

links (e.g., Col. 159, Lines 32-42; Col. 171, Lines 24-28; Col. 188, Lines 47-50;

Col. 51, Line 65 through Col. 52, Line 3).

13.   **As to claim 9** (incorporating the rejection in claim 8) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the dynamic database simulation means (e.g., Col. 284,

Lines 7-10) for testing the working prototype of the business application (e.g.,

Fig. 2, elements 206, 208; Col. 17, Lines 46-48; Col. 143, Lines 63-64; Col. 166,

Lines 2-57) comprise an XML document (e.g., Col. 41, Lines 14-48) simulating

an application database, the XML document being used to add, delete and

modify the application domain objects (e.g., Col. 277, Lines 29-34) and object

links (e.g., Col. 159, Lines 32-42; Col. 171, Lines 24-28; Col. 188, Lines 47-50;

Col. 51, Line 65 through Col. 52, Line 3).

14.   **As to claim 10** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the database simulation means (e.g., Col. 284, Lines 7-10)

for testing the working prototype of the business application (e.g., Fig. 2,

elements 206, 208; Col. 17, Lines 46-48; Col. 143, Lines 63-64; Col. 166, Lines

2-57) comprise object operation means for adding objects in a simulated

database, modifying the objects in the simulated database, deleting the objects

from the simulated database and finding, adding, modifying and deleting links

between the objects, the object operation means being used for testing the main

entity objects of the application (e.g., Col. 277, Lines 29-34; Col. 51, Lines 52-55;

Col. 271, Lines 28-31), the related-entities objects of the application (e.g., Fig.

42, element of Business Entity Component; Fig. 50, elements of "Workflow",

"Class Diagram"), the menu of the application (e.g., Fig. 40, elements 3906,

4006, 3908), the specific functions of the application and the functional

descriptions of the application (e.g., Fig. 49, element of Detailed Design).

15.   **As to claim 11** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) further comprising a database server (e.g., Col. 34, Lines 24-28)

connectable to the communication network (e.g., Fig. 16, element Network

Connections), wherein the communication components for feedback messages

(e.g., Col. 171, 24-28) between the users testing the working prototype of the

business application (e.g., Col. 14, Lines 15-25) and the user constructing the

solution comprise collaborative functions means (e.g., Col. 119, Lines 24-27; Col.

157, Lines 65-67; Col. 69, Lines 30-36) for providing a collaboration center with

the feedback messages centralized (e.g., Col. 30, Lines 41-46; Col. 49, Lines 33-
36) on the database server.

16.   **As to claim 12** (incorporating the rejection in claim 1) (Original), Allaire
discloses the distributed fabrication system wherein the factory building files are
selected from a group consisting of HTML files (e.g., P. 1, Sec. of "The Internet
and client-side application", 1st Par. – this model centered on a very thin client
based on HTML ...), DHTML components files, programs files, assemblies files,
components files, XML Documents files and Web Services files accessed (e.g.,
P. 2, Sec. of "Rich clients and rich Internet applications", 3rd Bullet - … and
DHTML …) from HTTP,S and SOAP protocols (e.g., P8, Sec. of "Enable the use
of web services and data services provided by application servers", 2nd Bullet - ..
with SOAP-accessible web services hosted over the Internet; 4th Bullet – Support
for integrating data via HTTP, sockets and XML …).

17.   **As to claim 13** (incorporating the rejection in claim 1) (Original), Bowman-
Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,
Lines 52-67) wherein the third tool further comprises components for
automatically generating a functional document of the solution (e.g., Fig. 14,
element 1416; Col. 53, Lines 21-27; Col. 53, Lines 46-50)

18.   **As to claim 14** (incorporating the rejection in claim 1) (Original), Allaire
discloses the distributed fabrication system wherein the solution comprises a

plurality of the business application (e.g., P. 8, Sec. of "Enable the use of web

services and data services provided by application servers", 2nd Bullet –

Coherent model for connecting rich clients to web services)

19.   **As to claim 15** (incorporating the rejection in claim 1) (Original), Bowman-

Amuah discloses the distributed fabrication system (e.g., Figs. 10-12; Col. 31,

Lines 52-67) wherein the testing of the working prototype of the business

application allows to determine a state of operability (e.g., Col. 23, Lines 1-4) and

profitability (e.g., Col. 25, Lines 15-19) of the solution by following a project go/no

go type workflow to reduce cost and time for project approval (e.g., Col. 116,

Lines 5-7, 14-17).

20.   **As to claim 16** (Previously Amended), Allaire discloses an applicative

framework system supplying a generic dynamically adaptable N-Tier client-server

object-oriented applicative infrastructure constructed on top of a third party

software system infrastructure to support a business application compatible with

XInternet technologies via a communication network (e.g., P. 2, Sec. of "Rich

clients and rich Internet Applications" - ... Rich client technologies should: ...; 2nd

Bullet – Integrate content, communications, and application interfaces into a

common environment ..."), the third party software system infrastructure being

complemented by database management system components, the applicative

framework system comprising:

- a client workstation connectable to the communication network, the
  workstation having a browser interface (e.g., P. 1, 1st Par. - ...
  Macromedia® is ushering in the next major innovation in <u>client-side</u>
  <u>Internet content and applications</u> ...; Sec. of "The <u>Internet</u> and <u>client-side</u>
  <u>applications</u>", 1st Par. - ... dynamically composed and delivered 'pages' to
  <u>web browsers</u>);

- a web server connectable to the communication network (e.g., P. 8, Sec.
  of "Enable the use of web services and data services provided by
  <u>application servers</u>", 1st Par. - Rich clients are made much more valuable
  when combined with logic and data delivered from application servers and
  XML web services ... Macromedia® will provide details on <u>new server</u>
  <u>solutions for building rich Internet applications</u> with Macromedia Flash®,
  Macromedia ColdFusion®, and other <u>applications servers</u>: ...);

- an applicative framework comprising generic adaptable software
  structures for the creation of the online business application on any
  specific technology platform using the web server, the business server
  and the database server on which the business application is fabricated,
  developed, tested and deployed (e.g., P. 2, Sec. of "Rich clients and rich
  Internet applications", 6th Bullet - Embrace <u>connected</u> and <u>disconnected</u>
  clients. ... be <u>online</u> and in a web browser to perform work ... Rich clients
  <u>must enable both of these types of applications to be easily built and</u>
  <u>deployed</u>), the applicative framework also comprising:

o user services for managing a business application user interface,
relying on a XInternet one web page application pattern (e.g., P. 7,
Sec. of "Enable rapid application development through components
and re-use, 1st Par. - … <u>common patterns and behaviors</u> to be
easily encapsulated into components that can be shared and re-
used by others … With Macromedia® Flash MX, … a new
Macromedia® Flash Component model that enables powerful
capabilities to be shared and used …), on a workstation having a
browser interface to access the business application online from
the web server on which business application web services are
deployed (e.g., Sec. of "Enable the use of web services and data
services provided by application servers, 1st Par. – Rich clients are
made much more valuable when combined with logic and data
delivered from <u>application servers and XML web services</u> ….; P. 2,
Sec. of "Rich clients and rich Internet applications", 2nd Bullet –
Integrate content, <u>communications</u>, and application interfaces into a
common environment), the business application user interface
being a dynamic web page avoiding web page transitions for user
experience (e.g., P. 2, Sec. of "Rich clients and rich Internet
applications", 3rd Bullet - … and DHTML …), the user services
comprising one web page application components library (e.g., P.
7, Sec. of "Enable rapid application development through
components and re-use, 1st Par. - … common patterns and

behaviors to be easily encapsulated into components that can be
shared and re-used …) for displaying the business application user
interface on the browser interface (e.g., P. 2, Sec. of "Rich clients
and rich Internet applications", (a) Provide an efficient, high-
performance runtime for executing code, content and
communications; (b) Integrate content, communications, and
application interfaces into a common environment; (c) Provide
powerful and extensible object models for interactivity; (d) Enable
rapid application development through components and re-use; (e)
Enable the use of web and data services provided by application
servers; (f) Embrace connected and disconnected client, and (g)
Enable easy deployment on multiple platforms and devices) and for
communicating between the business application user interface
displayed in the browser interface and the business application web
services deployed on the web server (e.g., P. 8, Sec. of "Enable the
use of web services and data services provided by <u>application</u>
<u>servers</u>", 1st Par. - Rich clients are made much more valuable
when combined with logic and data delivered from application
servers and XML web services … Macromedia® will provide details
on <u>new server solutions for building rich Internet applications</u> with
Macromedia Flash®, Macromedia ColdFusion®, and other
<u>applications servers</u>: …), the one web page application
components library providing bi-directional communications

between the workstation and the web server (e.g., P. 8, Sec. of "Enable the use of web services and data services provided by application servers", 3rd Bullet - ... communications server technology, Macromedia Flash MX applications will be able <u>to integrate two-way, real-time communications and data</u>)

Allaire does not explicitly disclose the followings:

- o a business server connectable to the communication network;

- o a database server connectable to the communication network; and

- o business services for managing business application logic and communications between the business application online web services, the business services being implemented on the business server, the applicative framework and system components of the third party software system infrastructure, the business services comprising generic adaptable components having interface application components, core application components, utility application components and task application components being used to insure code reusability, adaptability, uniformity, isolation, stability, robustness, scalability and performance; and

- o data services for managing online business application data access logic and communications between the business services and the third party database management system components on the database server upon request of the business server on which the business services are implemented, the data services comprising

generic adaptable database access components having database

scripts to automatically assist the creation of application database

tables and stored procedures required to access and manage

application data on the database server.

However, in an analogous art of *Attribute Dictionary in a Business Logic*

Services Environment, Bowman-Amuah discloses the followings:

- a business server (e.g., Col. 34, Lines 24-28) connectable to the

  communication network (e.g., Fig. 16, element Network Connections);

- a database server (e.g., Col. 34, Lines 24-28) connectable to the

  communication network (e.g., Fig. 16, element Network Connections); and

- business services for managing business application logic (e.g., Fig. 12,

  elements of Business Logic, Directory Services) and communications

  between the business application online web services (e.g., Col. 107,

  Lines 8-11), the business services being implemented on the business

  server (e.g., Fig. 12, elements of Information, Database), the applicative

  framework and system components of the third party software system

  infrastructure (e.g., Col. 37, Lines 39-42), the business services

  comprising generic adaptable components having interface application

  components (e.g., Fig. 40, element 4006), core application components

  (e.g., Col. 24, Lines 19-24), utility application components (e.g., Col. 36,

  Lines 4-7; Col. 59, Lines 14-16) and task application components (e.g.,

  Fig. 12, element System Services – Task) being used to insure code

reusability, adaptability, uniformity, isolation, stability, robustness,
scalability and performance (e.g., Col. 125, Lines 46-52); and

- data services (e.g., Col. 88, Lines 46-57) for managing business
  application data access logic (e.g., Col. 100, Lines 62-64) and
  communications (e.g., Fig. 16, element Network Connections) between
  the business services (e.g., Col. 126, Lines 60-65; Col. 199, Lines 10-13)
  and the third party database management system components (e.g., Col.
  52, Lines 32-34) on the database server (e.g., Col. 34, Lines 24-28) upon
  request of the business server (e.g., Col. 34, Lines 24-28) on which the
  business services are implemented, the data services comprising generic
  adaptable database access components (e.g., Col. 51, Lines 55-64)
  having database scripts (e.g., Col. 104, Lines 36-40) to automatically
  assist the creation of application database tables (e.g., Col. 278, Lines 30-
  33; Fig. 126, creates) and stored procedures (e.g., Col. 278, Lines 50-54)
  required to access and manage application data on the database server.

Therefore, it would have been obvious to one of ordinary skill in the art, at
the time the invention was made to combine the teachings of Bowman-Amuah
into the Allaire's system to further provide the followings:

- a business server connectable to the communication network;
- a database server connectable to the communication network; and
- business services for managing business application logic and
  communications between the business application online web services,
  the business services being implemented on the business server, the

applicative framework and system components of the third party software

system infrastructure, the business services comprising generic adaptable

components having interface application components, core application

components, utility application components and task application

components being used to insure code reusability, adaptability, uniformity,

isolation, stability, robustness, scalability and performance; and

- data services for managing online business application data access logic

and communications between the business services and the third party

database management system components on the database server upon

request of the business server on which the business services are

implemented, the data services comprising generic adaptable database

access components having database scripts to automatically assist the

creation of application database tables and stored procedures required to

access and manage application data on the database server in Allaire

system.

The motivation is that it would further enhance the Allaire's system by taking,

advancing and/or incorporating Bowman-Amuah's system which offers significant

advantages for software patterns and more particularly to a facility for

encapsulating architectural mechanisms within business objects as once

suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21).

21.   **As to claim 17** (incorporating the rejection in claim 16) (Original), Allaire

discloses the applicative framework system wherein the third party software

system infrastructure comprises a MICROSOFT .NET framework (e.g., P. 8, Sec.
of "Enable the use of web services and data services provided by application
servers", 2nd Bullet – Develop Macromedia® Flash services using … Microsoft®
.Net …) and Bowman-Amuah discloses COM+ service components (e.g., Col.
104, Lines 13-14, 17-21).

22.   **As to claim 18** (incorporating the rejection in claim 16) (Original),
Bowman-Amuah discloses the applicative framework system wherein the
interface application components comprise function means for performing the
following operations to help create a normalized data model (e.g., Col. 276, Lines
50-54):

- o creating, inserting, updating and deleting main objects (e.g., Col. 177,
  Lines 24-27; Col. 277, Lines 29-34); creating, inserting, updating and
  deleting main object related objects (e.g., Col. 177, Lines 24-27; Col. 277,
  Lines 29-34);

- o creating, inserting, updating and deleting main object links to the related
  objects (e.g., Fig. 42, element of Business Entity Component; Fig. 50,
  elements of "Workflow", "Class Diagram"); finding a list of the main objects
  (Fig. 159, element 15900; Col. 277, Lines 29-34, 35-37; Col. 177, Lines
  56-58; Col. 259, Lines 15-21);

- o selecting in the list one of the main objects (e.g., Col. 177, Lines 56-58;
  Col. 259, Lines 15-21); creating, inserting, updating and deleting main
  object operations (e.g., Col. 177, Lines 56-58; Col. 259, Lines 15-21; Col.

277, Lines 29-34, 35-37); creating, inserting, updating and deleting main

object related object operations (e.g., Col. 10, Line 56 through Col. 11,

Line 2; Col. 277, Lines 29-34);

o creating, inserting, updating and deleting object de-normalized views (e.g.,

Col. 276, Lines 55-59); and

o creating, inserting, updating and deleting application menus (Fig. 40,

elements 3906, 4006, 3908; Col. 130, Lines 21-24).

23.   **As to claim 19** (incorporating the rejection in claim 16) (Original),

Bowman-Amuah discloses the applicative framework system wherein the core

application components comprise function means for performing the following

operations:

o managing business application workflow (e.g., Fig. 12, element of

Workflow; Fig. 39, element 3902; Col. 116, Lines 5-7, 14-17) and handling

business application architectural aspects (e.g., Fig. 36, element 3604;

Col. 127, Lines 48-53), the architectural aspects transaction management

(Col. 199, Lines 25-29), error management (e.g., Col. 101, Lines 61-64;

Fig. 174, element 17408; Col. 291, Lines 37-39) and diagnostic

management (e.g., Col. 265, Line 41);

o implementing business application tasks and rules (e.g., Fig. 12, elements

of System Services – Task, Business Logic; Col. 199, Lines 1-6);

o   managing data services workflow transactions (e.g., Fig. 26, elements

2606, 2608; Fig. 179; Fig. 182; Fig. 185; Fig. 188); and

- o implementing database connections (e.g., Fig. 24, element 2402; Col. 84, Lines 11-25).

24.   **As to claim 20** (incorporating the rejection in claim 16) (Original), Bowman-Amuah discloses the applicative framework system wherein the utility application components (e.g., Col. 36, Lines 4-7; Col. 59, Lines 14-16) comprise an exception manager to manage warnings and errors (e.g., Col. 101, Lines 61-64; Fig. 174, element 17408; Col. 291, Lines 37-39), a diagnostic manager to diagnose the business application (e.g., Col. 265, Line 41) and to recover from errors (Fig. 30, element 3000 – Database Recovery; e.g., Col. 54, Lines 1-6), an email manager to handle electronic communications (e.g., Col. 73, Lines 1-33), a report manager to produce reports (e.g., Fig. 13, element 1316; Fig. 28, element 2880; Fig. 29; Fig. 31, element 3102), configuration files to replace old registry settings (e.g., Col. 26, Lines 64-65; Col. 27, Lines 48-59; Col. 259, Lines 15-21), and common functions means to provide basic reusable functions (e.g., Col. 11, Lines 3-6).

25.   **As to claim 21** (incorporating the rejection in claim 16) (Original), Bowman-Amuah discloses the applicative framework system (e.g., Figs. 10-12; Col. 31, Lines 52-67) wherein the task application components comprise a security manager to manage access rights validations (e.g., Col. 61, Lines 20-25; Col. 63, Lines 1-2) to the business application (e.g., Col. 52, Line 52 through Col.

53, Lines 6) and a reference data manager supporting generic or specific

reference table data models (e.g., Fig. 14, element 1410; Col. 52, Lines 30-34).

26.   **As to claim 22** (Previously Amended), Allaire discloses a distributed

software fabrication process for creating, while promoting strategic alignment

between information technologies departments and business units objectives

(e.g., P. 1, Sec. of "The Internet and client-side applications", 3rd Par. - ... these

trends are <u>driving the industry towards next-generation rich client</u>.), a business

application compatible with XInternet technologies via a communication network

system (e.g., P. 2, Sec. of "Rich clients and rich Internet Applications" - ... <u>Rich</u>

<u>client technologies</u> should: ...; 2nd Bullet – Integrate content, <u>communications</u>,

and application interfaces into a common environment ..."), the software

fabrication process comprising the steps of:

- displaying a software factory (e.g.,) through a browser interface of a client
  workstation connectable to the communication network (e.g.,), the
  software factory allowing a user to fabricate the business application in
  response to business need specifications, the software factory being
  displayed in the browser interface from factory building files (e.g.,);
- providing the factory building files from a web server to the client
  workstation and controlling the software factory displayed in the browser
  interface of the client workstation (e.g.,);

- defining a solution containing the business application via the software factory, the software factory comprising a first tool having components for entering solution parameters (e.g.,);

- validating the solution via the software factory, the software factory comprising a third tool having components for previewing the solution online by automatically generating a working prototype of the business application using dynamic database simulation means for testing the working prototype of the business application online and communication components for feedback messages between users testing the online working prototype of the business application and users constructing the solution (e.g.,);

- generating code offline (e.g., P. 2, Sec. of "Rich clients and rich Internet applications", 6th Bullet - Embrace connected and <u>be used offline</u> on occasionally connected devices … Rich clients must <u>enable both of these types of applications to be easily built and deployed</u>) via the software factory (e.g., P. 7, Sec. of "Enable rapid application development through components and re-use, 1st Par. - … <u>common patterns and behaviors</u> to be easily encapsulated into components that can be shared and re-used by others … With Macromedia® Flash MX, … <u>a new Macromedia® Flash Component model that enables powerful capabilities to be shared and used</u> …) to form an initial and operational version of the business application to be supplied as a normalized input to a regular desktop development system (e.g., P. 2, 6th Bullet - … <u>to be used offline</u> on

occasionally connected devices such as <u>personal digital assistants</u> (PDAs)

and <u>laptops</u> ...), the code forming the business application comprising an

applicative framework supplying a generic dynamically adaptable N-Tier

client-server object-oriented applicative infrastructure (e.g., P. 6, Sec. of

"Provide a powerful and extensible object model for interactivity", 1st Par. -

... ActionScript provides an object-oriented scripting model for controlling

and extending ...) constructed on top of a third party software system

infrastructure to support the business application on any specific

technology platform (e.g., P. 8, Sec. of "Enable the use of web services

and data services provided by application servers", 1st Par. - Rich clients

are made much more valuable when combined with logic and data

delivered from application servers and XML web services ...)

Allaire does not explicitly disclose the followings:

○ constructing the solution using business models in relation with the

solution parameters via the software factory, the software factory

comprising a second tool having components for designing basic

characteristics of the solution and a business domain model of the

business application having a main entity and related entities, the main

entity establishing relationships with the related entities, the main entity

and the related entities having attributes and actions, the second tool also

comprising components for designing a menu Of the business application,

specific functions of the business application, and functional descriptions

of the business application; and

○ determining a state of operability and profitability of the solution by following a

    project go/no go type workflow to reduce cost and time for project definition

    and approval and to improve strategic alignment between information

    technologies and business units objectives.

However, in an analogous art of *Attribute Dictionary in a Business Logic

Services Environment, Bowman-Amuah discloses the followings:

○ constructing the solution using business models in relation with the

    solution parameters via the software factory, the software factory

    comprising a second tool having components for designing basic

    characteristics of the solution (e.g., Fig. 42, elements of "Other Patterns",

    " Other Frameworks"; Fig. 50, element 5008) and a business domain

    model of the business application having a main entity and related entities

    (e.g., Fig. 42, element of Business Entity Component; Fig. 50, elements of

    "Workflow", "Class Diagram"), the main entity establishing relationships

    with the related entities (e.g., Fig. 104; Col. 232, Line 53 through Col. 233,

    Line 49), the main entity and the related entities having attributes and

    actions (e.g., Col. 10, Line 56 through Col. 11, Line 2), the second tool

    also comprising components for designing a menu Of the business

    application (e.g., Fig. 40, elements 3906, 4006, 3908), specific functions of

    the business application (e.g., Fig. 45; Col. Lines 30-31, 58-67), and

    functional descriptions of the business application (e.g., Fig. 49, element

    of Detailed Design); and

- o determining a state of operability (e.g., Col. 23, Lines 1-4) and
  profitability of the solution (e.g., Col. 25, Lines 15-19) by following a
  project go/no go type workflow to reduce cost (e.g., Col. 116, Lines 5-
  7, 14-17) and time for project definition and approval (e.g., Col. 116,
  Lines 5-7, 14-17) and to improve strategic alignment between
  information technologies and business units objectives (e.g., Fig. 48 –
  Business Perspective vs. Systems and Technology Perspective; Col.
  16, Line 66 through Col. 17, Line; 4; Fig. 48; Col. 162, Lines 16-19).

Therefore, it would have been obvious to one of ordinary skill in the art, at the
time the invention was made to combine the teachings of Bowman-Amuah into
the Allaire's system to further provide the followings:

- o constructing the solution using business models in relation with the
  solution parameters via the software factory, the software factory
  comprising a second tool having components for designing basic
  characteristics of the solution and a business domain model of the
  business application having a main entity and related entities, the main
  entity establishing relationships with the related entities, the main entity
  and the related entities having attributes and actions, the second tool also
  comprising components for designing a menu Of the business application,
  specific functions of the business application, and functional descriptions
  of the business application; and

- o determining a state of operability and profitability of the solution by
  following a project go/no go type workflow to reduce cost and time for

project definition and approval and to improve strategic alignment between

information technologies and business units objectives in Allaire system.

The motivation is that it would further enhance the Allaire's system by taking,

advancing and/or incorporating Bowman-Amuah's system which offers significant

advantages for software patterns and more particularly to a facility for

encapsulating architectural mechanisms within business objects as once

suggested by Bowman-Amuah (e.g., Col. 1, Lines 19-21)

27.   **As to claim 23** (incorporating the rejection in claim 1) (Original), Allaire

discloses the distributed fabrication system wherein the browser interface is a

container controller (e.g., P. 5, Sec. of "integrate content, communications and

application interfaces into a common environment", 1st Bullet - ... Macromedia

Flash® provides broad and fine-grained control over text formatting ...; 2nd Bullet

- ...; 3rd Bullet - ... developers can easily imagine and create any user interface

control ...); P. 6, Sec. of "Provide a powerful and extensible object model for

interactivity", 1st Par. - ... the degree of control and flexibility provided to

developers is enormous ...; 1st Bullet - ... an object-oriented scripting model for

controlling and extending ...; 6th Bullet - ... a new set of APIs from controlling

tabbing behavior ...)

28.   **As to claim 24** (incorporating the rejection in claim 16) (Original), Allaire

discloses the applicative framework system wherein the browser interface is a

container controller (e.g., P. 5, Sec. of "integrate content, communications and

application interfaces into a common environment", 1st Bullet - ... Macromedia

Flash® provides <u>broad and fine-grained control</u> over text formatting ...; 2nd Bullet

- ...; 3rd Bullet - ... developers can easily imagine and create <u>any user interface</u>

<u>control</u> ...); P. 6, Sec. of "Provide a powerful and extensible object model for

interactivity", 1st Par. - ... <u>the degree of control</u> and flexibility provided to

developers is enormous ...; 1st Bullet - ... an object-oriented scripting model for

<u>controlling and extending</u> ...; 6th Bullet - ... a new set of APIs from <u>controlling</u>

<u>tabbing behavior</u> ...)

29.   **As to claim 25** (incorporating the rejection in claim 22) (Original), Allaire

discloses a distributed software fabrication process wherein the browser interface

is a container controller (e.g., P. 5, Sec. of "integrate content, communications

and application interfaces into a common environment", 1st Bullet - ...

Macromedia Flash® provides <u>broad and fine-grained control</u> over text formatting

...; 2nd Bullet - ...; 3rd Bullet - ... developers can easily imagine and create <u>any</u>

<u>user interface control</u> ...); P. 6, Sec. of "Provide a powerful and extensible object

model for interactivity", 1st Par. - ... <u>the degree of control</u> and flexibility provided

to developers is enormous ...; 1st Bullet - ... an object-oriented scripting model

for <u>controlling and extending</u> ...; 6th Bullet - ... a new set of APIs from <u>controlling</u>

<u>tabbing behavior</u> ...)

Conclusion

30.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Ben C. Wang whose telephone number is

571-270-1240. The examiner can normally be reached on Monday - Friday, 8:00

a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

/Ben C Wang/

Examiner, Art Unit 2192

May 16, 2008

/Tuan Q. Dam/

Supervisory Patent Examiner, Art Unit 2192